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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/031,767	02/27/1998	KAZUHIKO HATANO	35.C12600	9089

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EXAMINER

TILLERY, RASHAWN N

ART UNIT PAPER NUMBER

2612

DATE MAILED: 12/28/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/031,767

Applicant(s)

HATANO, KAZUHIKO

Examiner

Rashawn N Tillery

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 24 October 2001 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Arguments

Applicant's arguments filed October 24, 2001 have been fully considered but they are not persuasive.

Examiner acknowledges that the subject matter sought to be patented and the subject matter of the prior art are different, however, Applicant's claim language is written broad enough so that a broad interpretation of the claims is permissible.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-2, 4-5, 7-8, 10, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (US5162914) in view of Kim (US5235427) in further view of Sekine et al (US5949481) in further view of Michael et al (US4272787).

Regarding claim 1, Takahashi discloses, in col. 2, lines 8-21, an image pickup device for increasing an apparent dynamic range of a video signal by synthesizing a single image from a plurality of images sequentially picked up at different exposure amounts. Takahashi does not explicitly disclose the use of motion vectors for prohibiting synthesization if the vectors are larger than a predetermined threshold. However, Kim reveals that it is well known to stop camera operation during the detection of excessive shake (see col. 3, lines 54-68 and col. 4, lines 1-13). While Kim discloses the use of mercury lead switches to determine the amount of shake in a camera, it is well known in the art, that as an alternative to mercury lead switches, that motion vectors perform the same task. Sekine discloses, in col. 7, lines 13-29, that it is well known in the art to utilize a motion vector detecting circuit for determining the

amount of shake in a camera and to also compare the detected vector to a predetermined threshold.

Neither Takahashi nor Kim nor Sekine explicitly disclose producing a single image which is not synthesized. In the same field of endeavor, Michael reveals, in col. 3, lines 55-68 and col. 4, lines 1-6, that it is well known in the art to utilize a single field, of multiple fields, in the detection of excessive movement in order to reproduce a still frame.

Michael teaches a T.V. picture freeze system capable of capturing a video frame comprising first and second fields, frame storage for storing information from the first and second fields, a movement detector storage for storing data indicative of any movement detected and a selector for selectively outputting information from a single or both fields depending on the stored movement data (see col. 2, lines 43-68).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a camera capable of stopping operation in the case of excessive camera shake, as taught by Kim, in the event that the plurality of images, taken at different exposures, as taught by Takahashi, were distorted and thus, prohibiting image synthesization. It would have also been obvious to one of ordinary skill in the art at the time the invention was made to implement the motion detecting means and comparison circuit, taught by Sekine, as an alternative to Kim's mercury switches. It would have been further obvious to one of ordinary skill in the art to implement Michael's teachings of reproducing a single field of a frame when the

Art Unit: 2612

detection of motion is excessive. One would have been motivated to do so in effort to form an image of an object from a moving scene free of distortion.

Regarding claims 2 and 10, see claim 1 above. In addition, Sekine discloses, in figure 1, a motion vector detecting circuit (30), a vector difference detecting circuit (40) and a comparison circuit (36).

Regarding claim 4, Takahashi discloses, in col. 11, lines 28-33, an image pickup device capable of changing a shutter speed in order to change the exposure amount.

Regarding claims 5 and 12, see claim 4 above.

Regarding claim 7, Takahashi discloses, in col. 11, lines 28-33, an image pickup device capable of changing an iris at high speed in order to change the exposure amount.

Regarding claims 8 and 14, see claim 7 above.

2. Claims 3, 6, 9, 11, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi in view of Sekine et al (US6130709) in further view of Sekine et al (US5949481) in further view of Michael et al.

Regarding claims 3 and 11, Takahashi discloses, in col. 2, lines 8-21, an image pickup device for increasing an apparent dynamic range of a video signal by synthesizing a single image from a plurality of images sequentially picked up at different exposure amounts. Takahashi does not explicitly disclose the use of motion vectors as a means for correcting the plurality of images in the event that they are larger than a predetermined threshold. However, Sekine reveals, in figure 6, that it is well known in the art to correct for shake, before outputting an enlarged image, using a movement

Art Unit: 2612

vector detecting circuit (62) and an image shift circuit (68) for shifting the image in accordance with a detection result (see col. 5, lines 52-67 and col. 6, lines 1-6 where the movement vector and image shift circuits are discussed).

Neither Takahashi nor Sekine explicitly disclose the use of the claimed motion vector detecting circuit, vector difference detecting circuit or comparison circuit. However, Sekine (US5949481) reveals, in col. 7, lines 13-29, that it is well known in the art to utilize a motion vector detecting circuit for determining the amount of shake in a camera and to also compare the detected vector to a predetermined threshold.

Neither Takahashi nor Sekine '481 nor Sekine '709 explicitly disclose producing a single image which is not synthesized based on a comparison result. Micheal reveals, in col. 3, lines 55-68 and col. 4, lines 1-6, that it is well known in the art to utilize a single field, of multiple fields, in the detection of excessive movement in order to reproduce a still frame.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a camera capable of correcting an image signal in the case of excessive camera shake, as taught by Sekine, in the event that the plurality of images, taken at different exposures, as taught by Takahashi, were distorted and output a synthesized image. It would have also been obvious to one of ordinary skill in the art at the time the invention was made to implement the motion detecting means and comparison circuit, taught by Sekine (US5949481), as an alternative to Sekine's motion detector, which only detects motion vectors between frames. It would have been further obvious to one of ordinary skill in the art to implement Michael's teachings

Art Unit: 2612

of reproducing a single field of a frame when the detection of motion is excessive. One would have been motivated to do so in effort to form an image of an object from a moving scene free of distortion.

Regarding claims 6 and 13, see claim 4 above.

Regarding claims 9 and 15, see claim 7 above.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rashawn N Tillery whose telephone number is 703-305-0627. The examiner can normally be reached on 9AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5359 for regular communications and 703-308-5359 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

RNT
December 20, 2001


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
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